



Congenital Syphilis Epidemiology in Bexar County 2008-2013

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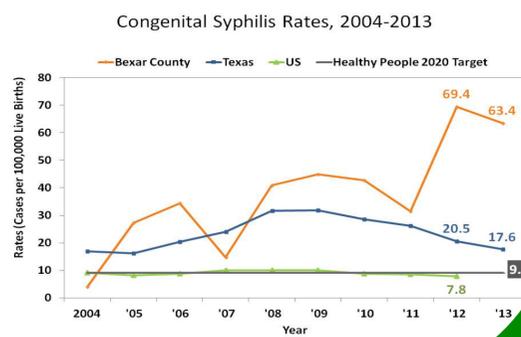
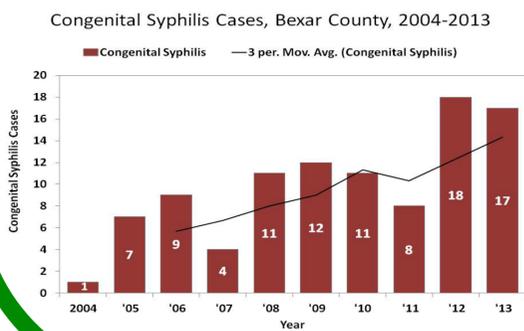
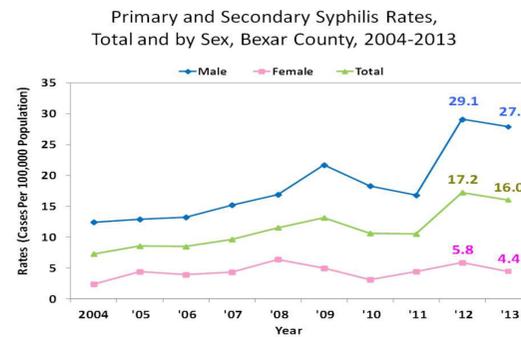
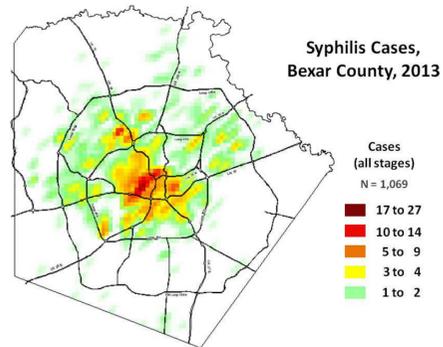
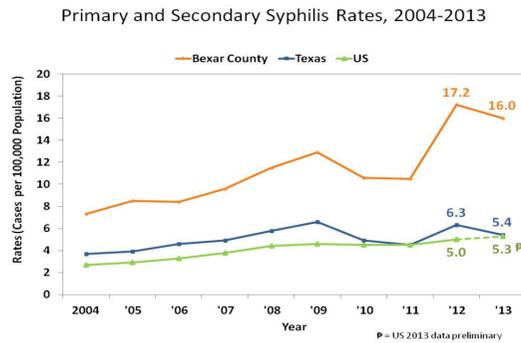
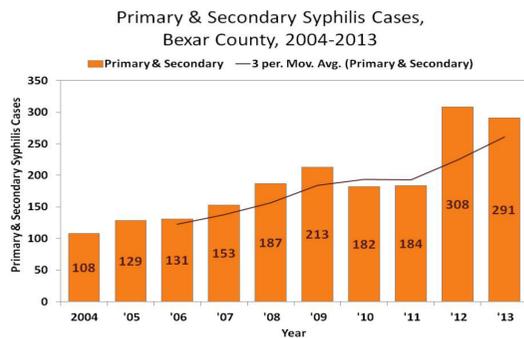


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Abstract

This poster exhibit displays the analysis of the epidemiology of the 78 congenital syphilis cases in Bexar County over the last six years 2008 – 2013. It addresses the demographics of the pregnant women (sex, race/ethnicity, age) who are reported with syphilis infection and who delivered babies with congenital syphilis. It also describes the risk factors most prevalent among this cohort, and how these factors have changed over time. An insight into the local population with syphilis assists decision and policy makers in effective syphilis prevention and treatment.

Syphilis Cases and Rates



Maternal Characteristics of Congenital Syphilis Cases

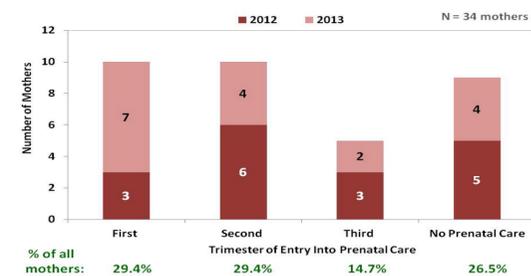
Methods

The methods utilized for this analysis included the following secondary data analysis sources: (1) Sexually Transmitted Diseases Management Information System (STD*MIS) database export, (2) data collected from Disease Intervention Specialist (DIS) and health reports to the Surveillance Unit, (3) MS Excel pivot tables and (4) both maternal and child chart reviews analyzing common risk categories identified in the tables below.

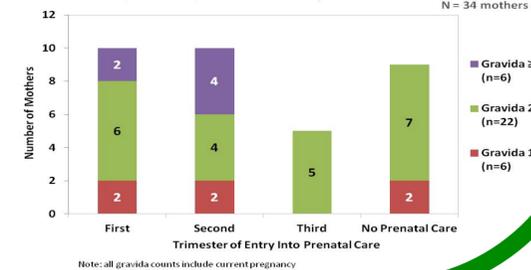
Age of Mother (Years)	Percent of Total Mothers in 2008-2011	Percent of Total Mothers in 2012	Percent of Total Mothers in 2013
Total Count of Mothers & Infants:	42 Mothers (43 Infants)	17 Mothers (18 Infants)	17 Mothers (17 Infants)
Maternal Age			
< 20 years old	14%	29%	6%
20 – 25 years old	45%	18%	47%
> 25 years old	41%	53%	47%
Prenatal Care Visits			
≥ 11 visits (Adequate)*	10%	23.5%	23.5%
5 – 10 visits (Medium)	17%	23.5%	23.5%
1 – 4 visits (Low)	19%	23.5%	29.4%
0 visits (None)	33%	29.4%	23.5%
Unknown	21%	n/a	n/a
Race/Ethnicity			
Hispanic	83%	82%	76%
Black, Non-Hispanic	10%	12%	18%
White, Non-Hispanic	7%	6%	6%
Vitality			
Stillborns	14%	29%	6%
Other Risk Factors of Interest			
History of Incarceration	n/a	41%	47%
Injection Drug Use	n/a	41%	53%
Sex Work History	n/a	41%	41%
Multiple Sex Partners	n/a	65%	65%
STIs Prior to Pregnancy	n/a	53%	82%
New STIs during pregnancy (excluding syphilis)	n/a	29%	6%
Record of Multiple Pregnancies (gravidita >1)	n/a	82%	82%

Number(s) of Prenatal Care Visits 2012-2013	None (0)	Low (1-4)	Medium (5-10)	Adequate* (≥11)	Total
Number of Mothers n = 34 Mothers (all % are out of the 34 mothers)	9 Mothers	9 Mothers	8 Mothers	8 Mothers	34 Mothers
History of Incarceration	7 (21%)	2 (6%)	4 (12%)	2 (6%)	15 (44%)
Injection Drug Use	8 (24%)	5 (15%)	2 (6%)	1 (3%)	16 (47%)
Sex Work History	7 (21%)	4 (12%)	2 (6%)	1 (3%)	14 (41%)
Multiple Sex Partners	8 (24%)	6 (18%)	5 (15%)	3 (9%)	22 (65%)
STIs Prior to Pregnancy	6 (18%)	6 (18%)	6 (18%)	5 (15%)	23 (68%)
Record of Multiple Pregnancies (gravidita >1)	7 (21%)	8 (24%)	7 (21%)	6 (18%)	28 (82%)
Stillbirths	3 (9%)	2 (6%)	0 (0%)	1 (3%)	6 (18%)

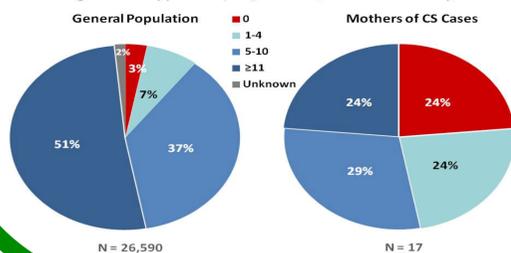
Trimester of Entry Into Prenatal Care Among Mothers of Congenital Syphilis Cases by Year, Bexar County, 2012 - 2013



Trimester of Entry Into Prenatal Care Among Mothers of Congenital Syphilis Cases by Number of Pregnancies (Gravidita), Bexar County, 2012 - 2013



Prenatal Care Visits, General Population vs. Mothers of Congenital Syphilis (CS) Cases, Bexar County, 2013



Sources and Notations

STI = Sexually Transmitted Infection
* The American College of Obstetricians and Gynecologists (ACOG). 2012. Guidelines for Perinatal Care. 7th edition. U.S. Department of Health and Human Services.
Data Sources: 2004-2012 data from Texas DSHS STD 2012 file; 2013 data from Texas DSHS STD 2013 file; US Census Bureau population estimates and Census counts for each respective year; Additional information from local STD*MIS & charts.

Acknowledgements

- Public Health Follow-Up, esp. Sian Hill, Gloria DeLaGarza, Sandra Quintanilla
- STD Surveillance; STD-HIV Branch, esp. Charlene Ransome
- Epidemiology Analysis Staff: John Berlanga, Mary Thomas

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Discussion

Primary and secondary (P&S) Syphilis

- There was a 171% increase in the number of P&S cases over ten years from 2004 to 2013. Although from 2012 to 2013 there was a 5% decrease in the number of P&S cases.
- The 2012 P&S rate (17.2) in Bexar County was 2.7 times higher than the Texas rate (6.3) and 3.4 times higher than the US rate (5.0).
- Syphilis cases (all stages) in 2013 were most concentrated directly northwest of downtown San Antonio, yet syphilis affects residents throughout Bexar County.
- In 2013 the male P&S rate of 27.9 was 6.3 times higher than the female P&S rate of 4.4. Although both rates decreased in 2013, the male P&S rate decreased less, as the 2012 male rate was only 5.0 times higher than the female P&S rate.

Congenital Syphilis (CS)

- There was a 160% increase in the number of CS cases over ten years from 2004 to 2013. The average number of CS cases from 2012-2013 (17.5) was 66% higher than the average number of cases from 2008-2011 (10.5).
- The 2012 CS rate (69.4) in Bexar County was 3.4 times higher than the 2012 Texas rate (20.5) and 8.9 times higher than the 2012 US rate (7.8).
- A recent 8.6% decrease in the rate of CS from 2012 to 2013 in Bexar County was observed over the same timeframe as a 24.1% decrease in the rate of female P&S.
- The percentage of mothers with adequate (≥11) prenatal care visits in the general population was more than twice that of the percentage of mothers who delivered a CS baby in Bexar County in 2013.
- This disparity highlights the need for stronger outreach to enroll women into care and increase awareness of resources.

Maternal Characteristics of CS Cases

- The top three risk factors found in mothers of CS cases during 2012 and 2013 include (1) record of multiple pregnancies (gravidita >1) (82%), (2) STIs prior to pregnancy (68%) and (3) multiple sex partners (65%).
- From 2012 to 2013, there was a 55% increase in the number of mothers with history of STI prior to pregnancy, from 53% to 82%.
- In 2012-2013, 83% of the stillbirths (5) were among mothers who had 4 or less prenatal care visits; there was 1 stillbirth (17%) born to a mother with adequate (≥11) prenatal care.
- Of the 8 mothers with adequate (≥11) prenatal care in 2012 and 2013 combined, 63% - 75% had (1) an STI prior to their current pregnancy or (2) a record of multiple pregnancies (gravidita >1).
- Of the 9 mothers with no prenatal care in 2012 and 2013 combined, following six risk factors were found in 67% - 89% of these mothers: (1) history of incarceration, (2) injection drug use, (3) sex work history, (4) multiple sex partners, (5) STIs prior to pregnancy, and (6) record of multiple pregnancies (gravidita >1).
- This suggests that some mothers of the CS cases face barriers relating to the social determinants of health. Challenges accessing health services, as well as within their social and physical environments must also be addressed in order to provide women with the preventive care necessary to keep themselves and their babies healthy.
- In 2013, more mothers of CS cases entered prenatal care in their first trimester as compared to 2012; this increased by 133% from 3 in 2012 to 7 in 2013, demonstrating improved early access to care although these CS diagnoses were not prevented.
- Also, 59% (20) of the mothers of CS cases in 2012 and 2013 entered care in their 1st or 2nd trimester. Of these 20 mothers, 40% received adequate (≥11 visits) prenatal care. This suggests potential missed opportunities for additional syphilis testing during routine prenatal care.
- The majority of mothers (64.7%) of CS cases from 2012 to 2013 had between 2 and 4 pregnancies.

Future Considerations

- These trends have many public health implications such as:
 - (1) testing in areas of high sex worker activity,
 - (2) increasing community and health provider education on STIs and prompt treatment of syphilis,
 - (3) enhanced partnerships with drug treatment agencies and
 - (4) developing interventions that address some of the social determinants of health.
- Metro Health STD clinic implemented a new STD/HIV case management program to help follow pregnant women at risk for syphilis to prevent transmission of syphilis to their babies; the program also refers women to organizations that service their psychosocial needs to help eliminate those barriers.